

**BY ORDER OF THE COMMANDER
36TH WING (PACAF)**

36 WING INSTRUCTION 91-102

28 OCTOBER 2010



Safety

**LAUNCH AND RECOVERY OF
EXPLOSIVE LOADED AIRCRAFT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 36 MXG/MXL

Supersedes: 36 WGI91-102 13 Jun 2008

Certified by: 36 MXG/CC
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Pages: 7

This instruction establishes responsibilities and procedures to be used by Operators and Maintainers while assigned to Andersen AFB. The purpose is to ensure safe launch and recovery of explosive loaded aircraft. Commanders and supervisors will ensure full compliance with this instruction. Deployed units will use home station procedures if not specifically addressed in this instruction. ANG/AFRC who are deployed/TDY here will follow this instruction. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

Extensive changes. Must be reviewed in its entirety.

1. REFERENCES AFMAN 91-201, Explosive Safety Standards; 60-Series Technical Orders, Explosive Ordnance Disposal (EOD) Procedures; T.O. 11A-1-33, Handling and Maintenance of Explosive Loaded Aircraft; AFI 21-101, Maintenance Management of Aircraft; AFOSH STD 91-100, Aircraft Flight Line-Ground Operations and Activities, 36 WG Instruction 13-204, Airfield Operations. This instruction is applicable to all operations and maintenance organizations.

2. GENERAL These procedures are designed to provide safety protection for personnel and equipment while arming/launching and de-arming/safing/recovering aircraft, to include hung weapons. The 36th Wing Weapons Manager (WWM) will be the final authority for determining the appropriate aircraft End of Runway (EOR), Immediate Prior to Launch (IPL)/safe, arm/de-arm, loading/unloading, hung ordnance/gun system malfunction procedures when Major Command directives do not address the situation.

3. AIRCRAFT PARKING/ARM/DE-ARM AND LAUNCH/RECOVERY PROCEDURES

3.1. The following munitions can be uploaded and downloaded at any designated aircraft parking area located on the South, Center or North ramps provided that the quantity of munitions being loaded or unloaded is limited to a single aircraft load. 1.2.2 internal gun ammunition (30 mm or less), 1.3 installed aircraft defensive flares, 1.4 and INERT munitions. All other explosive loaded aircraft must be parked IAW the airfield explosive site map.

3.2. The following procedures shall be used to arm weapons and launch aircraft for daily missions. Arm/De-arm areas are located on Taxiway F, South Ramp 7 pads S97 and S95. When heavy aircraft are present, use pads S96 and S98. Taxiway K can also be used as an alternate location to perform EOR.

3.3. Once an aircraft is loaded with munitions, an entry will be made in the aircraft forms indicating the quantity, type, status, location and fuze settings of munitions loaded. No additional maintenance shall be accomplished prior to weapons being safed or aircraft is placed into pre-maintenance status.

3.4. If applicable, during IPL/Safing procedures, one qualified 2A3X3 and two qualified 2W1X1 weapons personnel (of which one must be checklist qualified) shall be utilized. For live munitions other than chaff/flare, a certified Load Crew Chief must be present.

3.5. IPL/Safing procedures may be performed in the aircraft parking spots for the following munitions items: Captive Missiles protective gear, (safety pins and devices) Chaff and Flare modules safety pins, all inert hard bombs, Cold Gun and BDU-33.

4. END OF RUNWAY

4.1. The first aircraft will be marshaled into a spot farthest from the active runway. All aircraft will be positioned for IPL/De-arm on Taxiway F, SR 7 or use the alternate location Taxiway K (IAW 36 Wing Instruction 13-204). Trailing aircraft need not be marshaled into their parking spots. Aircraft carrying live FFO will be positioned for IPL/safing as follows: Arm/De-arm Areas located on Taxiway F, FFO positioned 300 Degree, on SR 7, FFO positioned 150 Degree. Taxiway K is not an approved FFO location.

4.2. The EOR marshaller will establish communication with the aircrew to ensure all armament switches are in the off/safe/normal position and their hands are visible to the marshaller or Weapons Crew Chief during IPL/arming operations.

4.3. The use of ground communication during de-arm is optional only if the aircrew have hands in view of the de-arm crew chief. The EOR marshaller will establish hand signals with the aircrew to ensure all armament switches are in the off/safe and normal position and their hands are visible to the marshaller or weapons crew chief during de-arm/safing operations.

5. HUNG WEAPON PROCEDURES

5.1. If a weapon is hung, aircrews shall comply with procedures in AFI 11-214, AFI 11-2X-XX Vol 3, local chapter 8, 36 WGI 13-204, and this instruction. Maintenance personnel will comply with procedures in AFI 21-101 and this instruction. If EOD is required at the de-arm area, the pilot must declare an emergency. Aircrews will alert the SOF (if available), command post, aircraft operations and ATC. Aircrews will identify the type, quantity and location of the hung store and whether it is live or inert. Additionally, the aircrew will identify any retained weapons by type, quantity, and location.

5.1.1. Aircraft landing with hung ordnance will park at C-4 or C-68. Fighters with guns on spot C-4 will point on a magnetic heading of 290 degrees. If on spot C-68, point east to northeast. Aircraft carrying hung live forward firing ordnance (FFO) will be positioned as follows: Arm/De-arm areas for FFO located on taxiway F, position FFO 300 degrees; on SR7, FFO shall be positioned 150 degrees. Airfield construction may cause changes in parking locations for hung ordnance. The Airfield Manager will provide guidance on parking if access to the hung ordnance spots are restricted or unavailable.

5.1.2. The Tower, in coordination with the SOF, MOC and EAMXS Pro Super shall direct aircraft returning with hung ordnance to the appropriate location and notify the fire department.

5.1.3. After parking, the aircrew shall remain in the aircraft with engines running until the weapons expediter arrives to conduct a ground weapons check and provide further instructions. The aircrew will not open the weapons bay doors, if applicable, unless directed to do so by the weapons expediter.

5.2. Maintenance Operations Center (MOC).

5.2.1. After notification from the operations desk, command post or ATC that an aircraft is landing with hung ordnance, MOC will initiate hung store Emergency Action Checklist.

5.2.2. Ensure applicable aerospace ground equipment (AGE) is available for immediate dispatch to the aircraft parking location.

5.3. For hung ordnance, every effort must be made to ensure the minimum number of people are present at the aircraft.

5.3.1. For recoveries, the senior fire official will establish the safe distance holding point and control entry to the area around the aircraft with declared hung ordnance. The senior fire representative and reserve responding vehicles will position at taxiway H.

5.3.2. A weapons expediter, a certified weapons load crew and aircraft crew chiefs will be dispatched to the aircraft. The weapons load crew will respond with a CTK, munitions lift truck (with RAM if applicable) and required technical data. Aircraft crew chiefs will respond with a tow vehicle and any tools, equipment, and technical data required to safe the aircraft for maintenance. A senior representative of the responding ground maintenance crew will report to the senior fire official at the scene (usually the "Chief 2" vehicle) for clearance to survey the aircraft and to relay conditions found by responding maintenance personnel.

5.3.2.1. The Weapons Expediter/EAMXS Production Super, will recommend to the senior fire official the maximum number of personnel allowed to enter the recovery

area. All other personnel will remain at the determined safe distance until cleared to approach by the Weapons Expediter, or after the aircraft weapons system is safed and the hung ordnance recovery is complete. Wing Safety, Quality Assurance, Wing Weapons Officer, Wing Weapons Manager (or equivalent), are not restricted from monitoring safing procedures.

5.3.2.2. Aircraft crew chief and weapons expediter will establish communication with the aircrew to determine aircraft status and to verify release attempts on retained and/or hung stores. Weapons expediter will verify elapsed time on JSOW/JASSM thermal battery with aircrew, if applicable.

5.3.2.3. If applicable, qualified weapons personnel will open weapons bay doors slightly (if possible) to conduct a visual inspection of the weapons bay. Notify the senior fire official and EOD if abnormal conditions are observed. EOD will determine weapons status and coordinate further course of recovery actions with the senior weapons representative.

5.3.2.4. The weapons load crew team chief will verify the condition of all weapons and determine if the weapons can be safed. If possible, weapons will be safed (ejector racks pinned). If ejector racks cannot be properly safed (immediately), instruct aircrew to shut down aircraft engines using normal shut down checklist. All hung munitions that cannot be safed will be downloaded at the current parked location.

5.4. The Weapons Expediter will determine when the aircraft weapons system is safed and the hung ordnance recovery is complete, and will notify the senior fire official and Production Super.

5.5. Aircraft and suspension equipment involved with hung ordnance will be impounded IAW AFI 21-101.

6. Gun Malfunction

6.1. Commanders and supervisors will ensure all personnel safing/clearing gun malfunctions are familiar with guidance within this instruction. Personnel will be kept to the minimum number necessary to complete the job safely according to applicable technical data. The responding senior fire official will function as the incident commander.

6.2. Weapons Section/Armament Section Chief must ensure highly qualified and knowledgeable 2W1X1 maintenance technicians are dispatched to gun malfunctions. Personnel will get clearance from the incident commander to enter the area, establish communication with the aircrew, and begin safing all other munitions prior to taking action on the unsafe gun. The gun maintenance crew will proceed to install the electrical and/or mechanical gun safing pins and ensure ammunition is cleared from the gun barrels.

6.3. If gun safing procedures are successful, the aircraft may taxi to the normal aircraft parking location where the gun stoppage supervisor, weapons maintenance crew and Armament Flight 7-level (if necessary) will continue to work the pilot reported discrepancy (if necessary).

6.4. If gun safing procedures are unsuccessful, aircrew will be directed to shut down engines prior to any attempt to troubleshoot the malfunction. Specific unsafe gun procedures shall be followed.

6.5. Weapons/Armament Section personnel will work as a gun maintenance team (GMT) until a point is reached that the gun is rendered safe. If jammed/broken rounds cannot be removed, the GMT, IAW applicable technical data, may proceed to disassemble necessary gun system components in an effort to safe/clear gun.

6.6. Gun system components containing live rounds may be transported to the Armament Flight maintenance bay (Building 18006) for attempts to remove jammed rounds from all associated gun system support equipment and components **except barrels**. **All barrels with retained rounds will be handed over to EOD for disposal.**

6.7. Notify MXG/MXQ, Munitions Control, Armament Systems Flight, MOC as necessary. Notify EOD of all gun malfunctions with loose propellant

7. Impoundment of Aircraft with Hung Ordnance/Jammed Guns/ Inadvertent Release

7.1. When aircraft impoundment can be directly related to weapons suspension equipment or a jammed gun system, the suspension equipment or gun system will be removed from the aircraft and impound transferred to an Armament Flight impoundment official. **Basic post-flight procedures will not be performed on equipment involved in an inadvertent or multiple releases.** The armament section impoundment official will select technicians, (preferably 7-skill level) to form an Armament Impoundment Team to assist in investigating the cause of the malfunction.

7.2. Malfunctioned munitions items or suspension equipment and cables must have an AFTO Form 350 *Repairable Item Processing Tag* and an Integrated Maintenance Data System (IMDS) screen 122 printout attached. The AFTO Form 350 will have a red border to signify the impoundment and the suspect item will be returned to the Armament Flight for investigation and possible deficiency reporting.

7.3. Carry out follow-up actions on suspected suspension or munitions items until a cause can be determined. The item owning agency will determine final problem and submit appropriate Deficiency Report (DR)

8. ALA/UAL/LALS Clearing Procedures

8.1. Notify MXG/MXQ, Munitions Control, Armament Systems Flight, MOC as necessary. Notify EOD of all jammed ALA/UALS/LALS with loose propellant.

8.2. Notify Munitions Control at extension 366-6300 and order delivery of empty ammunition storage cans. Ensure enough ammunition cans are ordered for the number of rounds to be downloaded if applicable.

8.3. Remove all live ammunition rounds from the ALA/UALS/LALS prior to delivery to Armament Flight (if possible). If system cannot be cleared, notify Armament Flight for assistance.

8.4. Separate all rounds into three categories: serviceable (inspection required) rounds, damaged rounds, and spent brass. Store in separate ammunition cans, affix an AFTO 350 tag

to each can stating category and number of rounds or brass in each can. Notify the Munitions Control when the ammunition cans are ready for pickup.

9. Ground Emergencies Involving Munitions

9.1. **Ground Emergencies Involving Munitions.** When a mishap occurs or an unknown or unsafe condition is detected involving munitions, flightline personnel will declare a ground emergency and notify the MOC.

9.2. The Senior Fire Official is the incident commander and will control access to aircraft or munitions involved in the incident.

9.3. EOD will inspect the munitions involved and will dispose of unsafe munitions or release munitions back to weapons personnel for download or movement. No one will handle affected munitions until EOD has made an assessment.

9.4. For fires involving explosives, follow the minimum withdrawal distances outlined in AFMAN 91-201, *Explosive Safety Standards*. The incident commander may further adjust withdrawal distances or direct other evacuations as required. Termination of the ground emergency will be declared by the incident commander.

10. Prescribed and Adopted Forms

10.1. Prescribed Forms: No forms prescribed

10.2. Adopted Forms

AF Form 847, *Recommendation for change of publication*

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

Terms

Delivered Weapon— A delivered weapon is a weapon confirmed released or jettisoned by the aircrew using the mission management system (MMS), Range Control Officer (RCO) or chase aircraft.

Release Attempt— A release attempt occurs when the aircraft issues a release pulse in either automatic or manual mode with all switches positioned correctly.

Hung Weapon— A weapon that does not separate from the aircraft after a release attempt and is indicated by a “Hung Store” warning, caution or advisory on the applicable aircraft panel/page. A release attempt occurs when the aircraft issues a release pulse in either automatic or manual mode with all switches positioned correctly. Following a release attempt, consider a weapon hung if it does not meet the requirements of a delivered weapon. After aircraft lands, a Ground Weapons Check will be accomplished by weapons personnel.

Retained Ordnance— A retained weapon for which no release was attempted, or weapons that was not released due to procedural or switch errors committed by the aircrew.

Inadvertent Release— The release of any store or ordnance that was not commanded by the pilot (single or multiple releases). After aircraft lands, a ground weapons check will be accomplished by weapons personnel.

Explosives—Loaded Aircraft—An aircraft is "explosives-loaded" when it carries munitions or explosives, internally or externally. The term does not include explosive components of aircrew escape systems or pyrotechnics installed in survival and rescue kits.

Live Ordnance— A munition that contains an explosive filler capable of producing a high order detonation, an explosive that can be expected to explode.

Inert—Contains no explosives, active chemicals, or pyrotechnics, but is not necessarily noncombustible.

Installed Explosives—Explosives items installed on aircraft or contained in survival and rescue kits such as flares, signals, egress system components, squibs, and detonators for jettisoning external stores, engine-starter cartridges, fire extinguisher cartridges, destructors in electronic equipment, explosives components of emergency equipment, and other such items or materials necessary for safe flight operations.

Forward Firing Ordnance— A munition that is propelled forward from the aircraft or which is propelled forward from the aircraft after separation, i.e. rockets, missiles, guns (AGM-158 is not considered a forward firing munition).

Ground Weapons Check— A visual inspection used to verify weapons status, required after an inadvertent release or hung ordnance.